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EXAMINER

WOO, ISAAC M

ART UNIT

PAPER NUMBER

2166

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/072,437	Applicant(s) BOLT, THOMAS B.	
	Examiner Isaac M. Woo	Art Unit 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-11, 13-22 and 28-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-11, 13-22 and 28-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to Applicant's amendment, filed on January 30, 2006 have been considered but are deemed moot in view of new ground of rejections below.
2. Claims 2, 4-6, 11, 13, and 16-19 are amended. Claims 1, 12, 23-27 are canceled. Claims 28-42 are newly added. And claims 2-11, 13-22 and 28-42 are pending.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 2-11, 13-22 and 28-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Zahavi et al (U.S. Patent No. 6,886,020, herein after, "Zahavi").

With respect to claim 28, Zahavi discloses a primary storage location (20 in fig. 2, Symetric disk storage array, col. 4, lines 54-65) including an input/output port (22, hosts with Window NT system or Unix in fig. 2, col. 5, lines 1-25); a backup storage device

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(46, archives in fig. 2, fig. 3, col. 6, lines 37-55); and a controller that transmits (data transfer, col. 6, lines 3-13 in fig. 3) data between the primary storage location (20 in fig. 2, Symetric disk storage array, col. 4, lines 54-65) and the backup storage device (46, archives in fig. 2, fig. 3, col. 6, lines 37-55); according to a duty cycle having a predetermined backup window period (82, collection interval in fig. 6, col. 6, lines 56-66) when uncompressed data from the primary storage location is copied to the backup storage device (46, archives stores collected raw data (col.1, lines 16-23) that is uncompressed data), and an idle period when uncompressed data from the primary storage location is not being copied in uncompressed form to the backup storage device (82, according to collection interval in fig. 6, col. 6, lines 56-66, data is archived (backup)); wherein during the idle period the controller retrieves the uncompressed data stored on the backup storage device, compresses the retrieved data (fig. 9, fig. 6, defines archived data shifts based schedule setup by user, archived data shifts with data compression, col. 3, lines 21-35, col. 7, lines 27-46, col. 8, lines 40-54), and then re-stores the compressed data on the backup storage device (fig. 9, archived data is shifted from hourly to daily to weekly to monthly in archives 46 in fig. 3, col. 3, lines 21-35, col. 7, lines 27-46, col. 8, lines 40-54).

With respect to claim 29, Zahavi discloses, the compression of data is performed using a software data compression algorithm, see (col. 7, lines 27-46).

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With respect to claim 30, Zahavi discloses, the backup storage device is an emulated tape drive containing an array of hard drives, see (fig. 3, fig. 4, col. 6, lines 1-25).

With respect to claim 2, Zahavi discloses, compression of the data is performed using execute a software compression algorithm, see (col. 7, lines 27-46).

With respect to claim 3, Zahavi discloses, a zip, a gnuzip, a bzip; a bzzip; a Lempel Ziv; and a LZS (Lempel Ziv Stac), see (col. 7, lines 27-46, col. 6, lines 26-55).

With respect to claim 4, Zahavi discloses, comprising successively repeating the receiving and storing of data during the backup window periods and retrieving, compressing and storing compressed data on the backup storage device during successive duty cycles respectively, see (col. 3, lines 21-35, col. 7, lines 27-46).

With respect to claim 5, Zahavi discloses, emulated tape drive containing an array of hard drives, see (fig. 3, fig. 4, col. 6, lines 1-25).

With respect to claim 6, Zahavi discloses, data is downloaded over a network from a primary storage location, see (fig. 2, col. 4, lines 54-65).

With respect to claim 7, Zahavi discloses, data is downloaded over a fiber-channel connection between the primary storage location and the backup storage device, see (fig. 2, col. 4, lines 54-67 to col. 5, lines 1-44).

With respect to claim 8, Zahavi discloses, data is downloaded over an ethernet connection between the primary storage location and the backup storage, see (fig. 2, col. 4, lines 54-67 to col. 5, lines 1-44

With respect to claim 9, Zahavi discloses, primary storage location and the backup storage device are part of a storage array network, see (fig. 2, col. 4, lines 54-67 to col. 5, lines 1-44

With respect to claim 10, Zahavi discloses, primary storage location and the backup storage device are part of a network attached storage configuration, see (fig. 2, col. 4, lines 54-67 to col. 5, lines 1-44).

With respect to claim 11, Zahavi discloses, backup storage device is directly electrically connected to a server, see (fig. 2, col. 4, lines 54-65).

With respect claim 31, Zahavi discloses, a primary storage location (20 in fig. 2, Symetric disk storage array, col. 4, lines 54-65) including an input/output port (22, hosts with Window NT system or Unix in fig. 2, col. 5, lines 1-25); a backup storage device

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(46, archives in fig. 2, fig. 3, col. 6, lines 37-55); a controller that copies uncompressed data from the primary storage location (20 in fig. 2, Symetric disk storage array, col. 4, lines 54-65) to the backup storage device (46, archives in fig. 2, fig. 3, col. 6, lines 37-55) during a predetermined backup period, (82, collection interval in fig. 6, col. 6, lines 56-66, data archives according to user defined schedule), and retrieves (data shifting, col. 3, lines 21-35) the uncompressed data from the backup storage device, compresses the retrieved data (fig. 9, fig. 6, defines archived data shifts based schedule setup by user, archived data shifts with data compression, col. 3, lines 21-35, col. 7, lines 27-46, col. 8, lines 40-54), and then re-stores the compressed data on the backup storage device (fig. 9, archived data is shifted from hourly to daily to weekly to monthly in archives 46 in fig. 3, col. 3, lines 21-35, col. 7, lines 27-46, col. 8, lines 40-54) during the an idle period that begins following a predetermined time period of inactivity through the in put/output port (82, collection interval in fig. 6, col. 6, lines 56-66, data archives according to user defined schedule).

With respect to claim 13, Zahavi discloses, compression of the data is performed using execute a software compression algorithm, see (col. 7, lines 27-46).

With respect to claim 14, Zahavi discloses, a zip, a gnuzip, a bzip; a bzip; a Lempel Ziv; and a LZS (Lempel Ziv Stac), see (col. 7, lines 27-46, col. 6, lines 26-55).

With respect to claim 15, Zahavi discloses, the software algorithm is stored in a memory associated with the controller, see (col. 5, lines 1-49).

With respect to claim 16, Zahavi discloses, fiber channel controller coupled between the controller and the input/output port which comprises an optical transceiver, see (fig. 2, col. 4, lines 54-65).

With respect to claim 17, Zahavi discloses, ethernet controller coupled between the controller and the input/output port which comprises an ethernet transceiver, see (fig. 2, col. 4, lines 54-67 to col. 5, lines 1-44).

With respect to claim 18, Zahavi discloses, network hub and bridge circuit coupled between the backup storage device and the controller, see (fig. 2, col. 4, lines 54-67 to col. 5, lines 1-44).

With respect to claim 19, Zahavi discloses, primary storage location that allows transmission of uncompressed data from the primary storage location to the backup storage device, see (fig. 2, col. 4, lines 54-67 to col. 5, lines 1-44).

With respect to claim 20, Zahavi discloses, network connection is one of the following types of network connections: fiber channel or ethernet, see (fig. 2, col. 4, lines 54-67).

With respect to claim 21, Zahavi discloses, primary storage location and the backup storage device are arranged in one of the following: a storage attached network or network attached storage configuration, see (fig. 2, col. 4, lines 54-67).

With respect to claim 22, Zahavi discloses plurality of clients and servers coupled to the primary storage location through a client network (fig. 2, col. 4, lines 54-67).

With respect claim 32, Zahavi discloses, coping (transferring to archives 46, fig. 3) uncompressed data during a predetermined backup window period, (82, collection interval in fig. 6, col. 6, lines 56-66, data archives according to user defined schedule) from the primary storage location (20 in fig. 2, Symetric disk storage array, col. 4, lines 54-65) to the backup storage device (46, archives in fig. 2, fig. 3, col. 6, lines 37-55) during a predetermined backup period, (82, collection interval in fig. 6, col. 6, lines 56-66, data archives according to user defined schedule), compressing the data (fig. 9, fig. 6, defines archived data shifts based schedule setup by user, archived data shifts with data compression, col. 3, lines 21-35, col. 7, lines 27-46, col. 8, lines 40-54) during the an idle period defined by when uncompressed data is not being copied from the primary storage location to the backup storage device (82, according to collection interval in fig. 6, col. 6, lines 56-66, data is archived (backup)), re-storing the compressed data on the backup storage device (fig. 9, archived data is shifted from hourly to daily to weekly to monthly in archives 46 in fig. 3, col. 3, lines 21-35, col. 7, lines 27-46, col. 8, lines 40-54)

during the an idle period (82, collection interval in fig. 6, col. 6, lines 56-66, data archives according to user defined schedule).

With respect to claim 33, Zahavi discloses, beginning the idle period following a predetermined time period of inactivity through the input/output port, see (82, collection interval in fig. 6, col. 6, lines 56-66, data archives according to user defined schedule).

With respect to claim 34, Zahavi discloses, interrupting the step of compressing the data when activity is detected through the input/output port, see (col. 3, lines 21-35, col. 7, lines 27-46, col. 8, lines 40-54).

With respect to claim 35, Zahavi discloses, interrupting the step of re-storing the compressed data when activity is detected through the input/output port, see (col. 3, lines 21-35, col. 7, lines 27-46, col. 8, lines 40-54).

With respect claim 36, Zahavi discloses, coping uncompressed data from the primary location (20 in fig. 2, Symetric disk storage array, col. 4, lines 54-65) through the input/output port to the backup storage device (46, archives in fig. 2, fig. 3, col. 6, lines 37-55) compressing the data copied to the backup storage device with (fig. 9, fig. 6, defines archived data shifts based schedule setup by user, archived data shifts with data compression, col. 3, lines 21-35, col. 7, lines 27-46, col. 8, lines 40-54) a controller during the an idle period that begins following a predetermined time period of inactivity

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through the in put/output port (82, collection interval in fig. 6, col. 6, lines 56-66, data archives according to user defined schedule), and re-storing the compressed data on the backup storage device (fig. 9, archived data is shifted from hourly to daily to weekly to monthly in archives 46 in fig. 3, col. 3, lines 21-35, col. 7, lines 27-46, col. 8, lines 40-54) during the an idle period (82, collection interval in fig. 6, col. 6, lines 56-66, data archives according to user defined schedule).

With respect to claim 37, Zahavi discloses, compression of data is performed using a software data compression algorithm, see (col. 7, lines 27-46).

With respect to claim 38, Zahavi discloses, comprising successively repeating the receiving and storing of data during the backup window periods and retrieving, compressing and storing compressed data on the backup storage device during successive duty cycles respectively, see (col. 3, lines 21-35).

With respect to claim 39, Zahavi discloses, backup storage device is an emulated tape drive containing an array of hard drives, see (fig. 3, fig. 4, col. 6, lines 1-25).

With respect to claim 40, Zahavi discloses, data is downloaded over a network from a primary storage location, see (fig. 2, col. 4, lines 54-65).

With respect to claim 41, Zahavi discloses, interrupting the step of compressing the data when activity is detected through the input/output port, see (col. 3, lines 21-35, col. 7, lines 27-46, col. 8, lines 40-54).

With respect to claim 42, Zahavi discloses, interrupting the step of re-storing the compressed data when activity is detected through the input/output port, see (col. 3, lines 21-35, col. 7, lines 27-46, col. 8, lines 40-54).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac M. Woo whose telephone number is (571) 272-4043. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IW
April 28, 2006


JEAN M. CORRELUS
PRIMARY EXAMINER